

FOLEY**RECEIVED
CENTRAL FAX CENTER
MAY 19 2004****FOLEY & LARDNER LLP
ATTORNEYS AT LAW**WASHINGTON HARBOUR
3000 K STREET, N.W., SUITE 500
WASHINGTON, D.C. 20007-5143
TELEPHONE: 202.672.5300
FACSIMILE: 202.672.5399
WWW.FOLEY.COM**OFFICIAL****FACSIMILE TRANSMISSION**Total # of Pages 14 (including this page)

TO:	PHONE #:	FAX #:
Examiner Steven Rao U.S. PTO		(571) 273-1718 (703) 872-9306

From : Phillip J. Articola

Email Address : particola@foley.com

Sender's Direct Dial : 202.672.5535

Date : May 19, 2004

Client/Matter No : 040301-0578

User ID No : 0022

MESSAGE:**Per your request**If there are any problems with this transmission or if you have not
received all of the pages, please call .

Operator:

Time Sent:

Return Original To:

Carolynn D. Mallard-Williams

CONFIDENTIALITY NOTICE: THE INFORMATION CONTAINED IN THIS FACSIMILE MESSAGE IS INTENDED ONLY FOR THE PERSONAL AND CONFIDENTIAL USE OF THE DESIGNATED RECIPIENTS NAMED ABOVE. THIS MESSAGE MAY BE AN ATTORNEY-CLIENT COMMUNICATION, AND AS SUCH IS PRIVILEGED AND CONFIDENTIAL. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT OR ANY AGENT RESPONSIBLE FOR DELIVERING IT TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT YOU HAVE RECEIVED THIS DOCUMENT IN ERROR, AND THAT ANY REVIEW, DISSEMINATION, DISTRIBUTION OR COPYING OF THIS MESSAGE IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE AND RETURN THE ORIGINAL MESSAGE TO US BY MAIL. THANK YOU.

(34)

Receipt is hereby acknowledged of the following:

Applicant: Nobutoshi AOKI et al.

Docket No. 040301/0578

Serial No.: 09/440,928

Filing Date: November 16, 1999

For: SEMICONDUCTOR INTEGRATED CIRCUIT INCLUDING INSULATED GATE FIELD EFFECT TRANSISTOR AND METHOD OF MANUFACTURING THE SAME

1. Information Disclosure Statement (6 pages)
2. Form PTO/SB/08 (1 page)
3. Six (6) references

Date Filed: June 25, 2003

Due Date: June 26, 2003

Return To: RLS/CSC:ko

Inspected by: *Abbas*



002.1034688.1

Application No. 09/440,928

Attorney Docket 040301/0578

TIMING OF THE DISCLOSURE AND FEE

The instant Information Disclosure Statement is being filed in compliance with 37 C.F.R. § 1.97(c) prior to the mailing date of either a final action or a notice of allowance. Accordingly, pursuant to 37 CFR § 1.97(c), a statement or fee is required. The statement under 37 CFR § 1.97(e)(1) is provided below.

STATEMENT

The undersigned hereby states in accordance with 37 C.F.R. § 1.97(e)(1) that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of this Information Disclosure Statement.

CONCISE EXPLANATION OF RELEVANCE

Documents A5-A10 were cited in a Japanese office action during prosecution of a counterpart Japanese application. Documents A5-A10 are in Japanese.

The relevance of documents A5-A10 is based on the following partial translation of the Japanese Office Action:

Reasons

1. The invention of the below claims of the subject application should not be granted a patent under the provision of Patent Law Section 29 (1) 3 since it has been cited in the below-noted publications distributed in Japan or other countries prior to the filing of the subject application.
2. The invention of the below claims of the subject application should not be granted a patent under the provision of Patent Law Section 29 (2) since it could have been easily made by a person skilled in the art based on the inventions cited in the below-noted publications which had been distributed in Japan or other countries prior to the filing of the subject application.
3. The invention of the below claims of the subject application should not be granted a patent under the provision of Patent Law Section 29 (2) since it is identical with an invention described in the specification or drawings originally attached to the request of the below-noted patent application, which was filed prior to the filing

Attorney Docket 040301/0578

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**RECEIVED
CENTRAL FAX CENTER**

MAY 19 2004

OFFICIAL

Applicant: Nobutoshi AOKI et al.

Title: SEMICONDUCTOR INTEGRATED CIRCUIT INCLUDING
INSULATED GATE FIELD EFFECT TRANSISTOR AND METHOD
OF MANUFACTURING THE SAME

Appl. No.: 09/440,928

Filing Date: November 16, 1999

Examiner: S. Rao

Art Unit: 2814

**INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. § 1.56 AND § 1.97****Mail Stop NON-FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

Submitted herewith on a modified Form SB/08 is a listing of documents known to applicants in order to comply with applicants' duty of disclosure pursuant to 37 CFR §1.56. Copies of the listed documents are being submitted to comply with the provisions of 37 CFR §1.97-1.98.

The submission of such a document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* prior art reference against the claims of the present application.

Application No. 09/440,928

Attorney Docket 040301/0578

date of the subject application and was later published. Furthermore, the inventor of the subject application is not the same as the inventor who made the said invention and the applicant of the subject application at the time of filing the subject application is also not the same as the applicant of said application.

4. The subject application does not comply with the requirements under Patent Law Section 36 (4).

5. The subject application does not comply with the requirements under Patent Law Section 36 (6) 2.

6. The subject application does not comply with the requirements under Patent Law Section 37.

Reasons 1 and 2

[Claims 1-11, 12-14, 15-21, 22, 23-25]

Reasons 1 and 2

References: 1, 2, 3, 4, 5

(Note)

Refer to Reference 1 (The entire text is relevant but particularly the description re Embodiment 3 and 4). Reference 1 discloses the invention using the material including Ge (obviously including SiGe) for both gate electrode and source drain electrode and Si for the locations to be silicified.

It is publicly known, as disclosed in References 2 (Refer to the working examples.) and 3 (Especially description of Fig. 4), to have SiGe as the lowest layer portion of the gate electrode.

Furthermore, the layer structure and the composition ratio profile can be appropriately determined by a person skilled in the art, taking into the account the element's characteristics of the final product, process conditions, etc. (Should be continuous using ion injection, step-by-step using film formation method.)

References 4 (especially Embodiment 7) and 5 (description re Figs 15-19 although selective description) discloses the technology silicifying the upper layer when SiGe and Si are laminated in that order as a manufacturing method.

Reason 3

Application No. 09/440,928

Attorney Docket 040301/0578

[Claims 4-11, 12, 25]

Reason: 3

Reference 6

(Note)

Refer to the description of the third embodiment of Specification 6.

Reason 4

[Precise explanation of invention]

Reason: 4

The scope of the claims of the subject application includes references to "1st Group-Four-Element" "2nd Group-Four-Element" and Si, Ge and C are included therein respectively. However, the precise explanation of invention or the drawings only provide the examples using Si as "1st Group-Four-Element" and Ge as "2nd Group-Four-Element", and does not discuss other combinations of elements.

If the structure, manufacture method and the effects can be easily anticipated from the above-mentioned examples, it is not a concern. However, as the subject application explains in [Issues to be solved by this invention], the invention of the subject application is only valid using Si as "1st Group-Four-Element" and Ge as "2nd Group-Four-Element", and the results in the case where the substitutes are used cannot be estimated.

Therefore the precise explanation of this invention does not describe other combinations than Si and Ge as "1st Group-Four-Element" and "2nd Group-Four-Element" respectively for a person skilled in the art to carry out.

Reason 5

[Claims 1-25]

Reason 5

The scope of Claims 1-4, 10-16, 21-25 includes the combination of "1st Group-Four-Element" and "2nd Group-Four-Element", of which the effect is not convincing, if literally interpreted. However, since it is not clear if such a combination is included in the scope of patent claims, the scope of the invention is unclear (Refer to Reason 4).

"Gate insulating film side" referred to in Claim 1 of the subject application, by such description itself, does not clearly identify which portion of the gate electrode it should be. (It is

Application No. 09/440,928

Attorney Docket 040301/0578

generally believed to be the part which is in contact with the gate insulating film, as can be understood by other descriptions of Claim 1, but Claim 25 may indicate otherwise. Then, it is possible that "2nd Domain" could be further away from the gate insulating film than "1st Domain" in Claim 1.) The same can be said for other claims with the similar description.

Claim 4 uses a term, "substantially", but it is not clear how much is within the scope. The scope of the invention is, therefore, unclear. The same can be said for other claims using the same similar description.

Reason 6

Reason: 6

Claims 1-25 of the subject application, with issues to be solved and main elements of invention considered, do not satisfy the unity of invention. The issues to be solved contain a phrase, "using SiGe as electrode but the Silicide electrode does not contain Ge", however, Claims 1-3 do not have Silicide structure. Furthermore, the above-mentioned issues themselves are cited in Reference 1. Considering the main elements of the invention, the invention cannot be united since it includes claims which do not require Silicide and claims which are not related to one another because of gate electrodes and source drain electrodes (could be related in a bigger concept, but since it does not evade prior art, the main elements need to be further limited.).

References

1. JP 10-163130
2. JP 10-027854
3. JP 05-235335
4. JP 05-183160
5. JP 06-077246
6. Japanese Application No. 09-156211 (JP 11-003999)

The statements in the Japanese office action are based on a translation that applicants' representative obtained. These statements should in no way be considered as an agreement by applicants with, or an admission of, what is asserted in the Japanese office action.

English language translations of documents A5-A10 are not readily available; however, English language abstracts are provided herewith. The absence of such translations

Application No. 09/440,928

Attorney Docket 040301/0578

does not relieve the PTO from its duty to consider the submitted documents (37 CFR §1.98 and M.P.E.P. § 609).

Applicants respectfully request that the listed documents be considered by the Examiner and formally be made of record in the present application and that an initialed copy of Form SB/08 be returned in accordance with MPEP §609.

Respectfully submitted,

Date June 25, 2003FOLEY & LARDNER
Customer Number: 22428

22428

PATENT TRADEMARK OFFICE

Telephone: (202) 672-5300

Facsimile: (202) 672-5399

By

Aaron C. ChatterjeeRichard L. Schwaab
Attorney for Applicant
Registration No. 25,479Aaron C. Chatterjee
Registration No. 41,398

Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge deposit account No. 19-0741 for any such fees; and applicants hereby petition for any needed extension of time.

MODIFIED PTO/SB/08 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: June 25, 2003 (use as many sheets as necessary)			Complete if Known		
			Application Number	09/440,928	
			Filing Date	11/16/1999	
			First Named Inventor	Nobutoshi AOKI et al.	
			Group Art Unit	2814	
			Examiner Name	S. Rao	
			Attorney Docket Number	040301-0578	
Sheet	1	of	1		

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
	A5	JP	10-163130	#	TOSHIAKI	06/19/1998		
	A6	JP	10-027854		NAOKI	01/27/1998		
	A7	JP	05-235335		MITSURU	10/09/1993		
	A8	JP	05-183160		AKIRA et al.	07/23/1993		
	A9	JP	06-077246		MOSLEHI	03/18/1994		
	A10	JP	11-003999		TAKASHI	01/06/1999		

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.